

## An Evaluation of Cycle Training in the UK

Anderson A. Etika, Joseph O. Ukpata & Desmond E. Ewa

Department of Civil Engineering, Cross River University of Technology, Calabar, Nigeria.  
P.O. Box 946, G.P.O. Calabar Nigeria.

### ABSTRACT

This study was undertaken to find out the extent to which cycle training is delivered across the various Local Authorities in the United Kingdom (UK), and the most effective ways of sustaining them. A total of 60 local authorities across the UK took part in a telephone/online survey where the cycle training officers were asked questions on their scheme contents, processes and outcomes. The results show that they all operated cycle training with majority complying with the National Cycling Standard (Bikeability). The courses were all on-road based with little classroom training involving demonstration and talks. There was no technology or interactive video. It was also found that the schemes had little parental involvement in the training element except where volunteers were parents. Most of the schemes were delivered intensively over a period of one to two weeks rather than spreading them over four to five weeks which is a best practice. There was no formal evaluation and assessments in the schemes. The schemes were mostly subsidized by the Department for Transport (DFT) at a cost of £40 per pupil for the Bikeability schemes and where operated locally subsidised by the local authority. The novel and best practices found were the on-road elements, the use of the national standard by most council, and the risk assessment and accident management procedures.

**Keywords:** *Accidents, Bikeability, Cyclist, Cycling, Standards, Training*

### 1. INTRODUCTION

According to the World Health Organization (WHO) global status report on road safety (2009), 1.3 million people die from road accidents yearly, while the number of injured could be as high as 50 million. In 2004, the WHO in Geneva, forecasted a rise in road traffic death and injuries by 65% between 2000- 2020 with death on the increase in low-middle countries by 80% and majority of the death are among vulnerable road users-pedestrians and cyclist.

As at 2004, Road traffic injuries was ranked 9th leading cause of death with 2.2% and Ischemic heart disease(12.2%), Cerebrovascular disease(9.7%), Lower respiratory infections (7.0%), Chronic obstructive pulmonary disease (5.1%), Diarrhoeal diseases(3.6%), HIV/AIDS (3.5%), Tuberculosis(2.5%) and lung cancer (2.3%) above it, but forecast shows that by 2030, it will be the 5th at 3.6% topping HIV (2.0%) and cancer (2.2%) (WHO, 2009).

Though the UK has a good ranking as far as road safety is concern, its cyclist fatalities is of great concern with 2,771 KSI in 2010, (DFT, 2010) which is a staggeringly high number considering it low cycle usage when compared to other European countries like, The Netherland, Denmark, Germany and Sweden which have higher cycling usage (with 27%, 19%, 10% and 7% cycle usage respectively) (Ministerie Van Verkeer en Waterstaat, 2009). Cycling in Germany and Denmark is not quite as safe as in The Netherland but twice as safe as in the UK (Pucher and

Buehler, 2008). According to the European Commission Road safety statistics 2,440 cyclists were killed in year 2008, with Bicycle fatalities making up 6.5% of the total number of road accident fatalities in 2008 in the EU-23 countries.

The Royal Society for the Prevention of Accidents (RoSPA) reports that, about one-fifth of cyclists killed in the UK are children and most accidents happening in urban areas involving collisions at junctions and roundabouts.

The proportion of cyclist KSI in the UK is about 15% of the total casualties in the UK. This can be seen in Figure 1.

According to the DFT 2010 annual road safety statistics, 2,771 Cyclist were reported killed and seriously injured. This figure is staggeringly high considering the low cycle usage in the UK when compared to other more cycling friendly nations such as Sweden, The Netherland and Denmark which have higher cycling usage.

Reassuringly, Road crash injury is largely preventable and predictable; it's a human made problem amenable to rational analysis and countermeasure. While many countries have taken positive steps towards improving the institutional framework needed to support road safety, many challenges remain. According to the WHO, only one-third of world countries have a national road safety framework that is endorsed by the government that includes specific targets and that has funding allocated for its implementation (WHO, 2009).

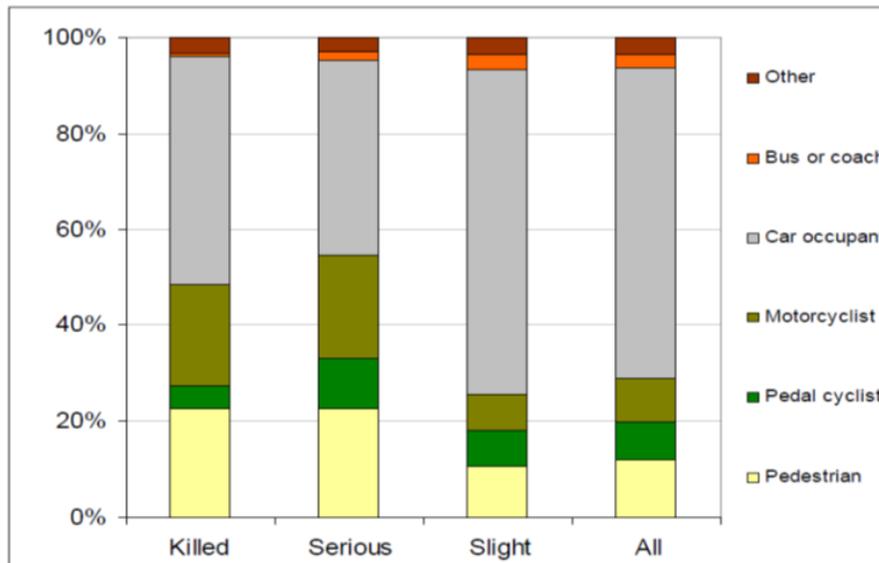


Figure 1: Proportion of reported casualties by road user type and severity: GB 2009 (Source: Transport Statistics Great Britain, 2010)

Improving safety in road transport is a policy imperative, given the number of death and injuries caused yearly. A global approach is required, involving legislative, educational and other measures. Safety has to be addressed in all aspects of the design, operation and interfacing of the transport system – affecting road users, vehicles and the corresponding infrastructure.

The UN has proclaimed the period 2011-2020 as the Decade of Action for Road Safety, “with a goal to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing activities conducted at the national, regional and global levels”. As more countries begin or continue to take steps towards addressing their national road safety problem, it has become apparent that regular assessment and evaluation of road safety schemes is needed.

The National Cycling Strategy (NCS) was launched in 1996 by the conservative led government and soon after published in the 1998 transport white paper (A New deal for Transport) of the Labour government with the aim to increase cycle use. The NCS aimed to “establish a culture which favours the increased use of bicycles for all age groups; develop sound policies and good practices; seeking out innovative, practical and effective means of fostering accessibility by cycle and improving cycling safety” (DOT, 1996).

## 2. PREVIOUS STUDIES

A number of studies have been conducted concerning cycling as an alternative mode of transportation. For instance, Franklin (2007) argues that many people would like to cycle or cycle more, however the traditional myths

that cycling is hard and slow have been amplified in recent years by the perception that cycling is also inevitably unsafe. He continues that many people fear riding in today’s traffic, on roads too often designed primarily for motor vehicles and feel there is little cyclist can do to protect themselves from the hazard present. But what most people do not know is that learning to ride skilfully through use of appropriate riding techniques can not only be safe but also fun and with the good health that comes with it. Studies have shown that cycling for at least 30 minutes a day gives people a level of fitness equivalent to being 10 years younger(DFT, 2007).

The UK Government has consistently promoted cycling by children and young people since the launch in 1996 of the National Cycling Strategy.

The Department for transport in conjunction with other Cycling and road safety organisation created a National Standard for Cycle Training also known as *Bikeability* in year 2007 which is the flagship and consumer brand name for the government cycle training programme which is designed to help develop observation and manoeuvrability skills in kids and adults. It aims at having half a million children to be *Bikeability* trained by 2012 and an ultimate vision of encouraging young people to cycle by ensuring that no child leaves primary school without the chance to receive on road cycle training, which is designed to give the next generation the skills and confidence to ride their bikes on today’s roads.

One of the biggest barriers to Cycling is the anxiety about dangers on the road; hence training is needed to encourage more people to cycle and cycle safely. Cycling training aims to make Cyclist safer on the road by extending their knowledge and cycling skills (McMahon

& O'Reilly, 2000). In a research carried out by TRL in 1996 on the effectiveness of Child cycle training scheme, it found out that trained children perform better than untrained on general cycling knowledge and displayed safer cycling behaviours with the effects lasting for 2 years. The report also shows that trained children performed significantly better than untrained ones in practical test and concluded by saying that training children how to ride safely has a lasting positive effect on their cycling practice and knowledge of road safety.

Cycling proficiency training assists children overcome skill-, knowledge- and confidence related barriers to cycling. Research suggests that children who receive cycle training are more likely to cycle, cycle on-road, have safer cycling behaviours and less likely to make errors and to be involved in a crash than their counterparts without cycle training (Telfer et al 2005). In a case control study of different types of established cycling schemes in the UK by McMahon & O'Reilly (2000), the results suggest that training children to ride safely at around the age of ten has a lasting positive effect on their cycling practice and knowledge of road safety with test of knowledge and skills were considered to be proxy's for actual behaviour. A study of Oxfordshire cyclist casualties by Mills (1989) suggest that trained young cyclist are about three times less likely to become casualties as those untrained. In a Survey in 2005 by Cycle training UK (CTUK) and commissioned by TRL to ascertain the effectiveness of cycling training, it found out that trained cyclist: feel more confident on the road; will cycle more; will cycle further; make more trips by bike; and more likely to carry on cycling all year round (London Cyclist, 2005).

In an effectively omnibus surveys conducted by the Synovate research reinvented For Transport for London (TFL) between June 2007 and March 2008 to identify people who have had cycling training, it found out that cycling training seem to have a positive effect on peoples attitudes to cycling on roads and that training increased cycling on London roads (TFL, 2008).

However there have been concerns has been observed recently on the efficacy of the training courses with arguments that accident occur too infrequently to be a viable evaluative criterion and attitudes and behaviour have been suggested as alternatives (Colwell Culverwell, 2002). They argue that a training course does not seem to reduce the likelihood of being injured in a cycle accident but rather a safe cycling behaviour results from completing a course in cycling training. Preston (1980) argues that children who had taken but failed the cycling test had much higher accidents rate than other children who passed. Preston concluded that there might be a short-term benefits of cycle training (about 18 months) for children who were trained at the age of 10 or 11 years. However Bailey (1994) concludes that cycling training

programme not yet shown to be a value as accident countermeasures.

In a recent research to explore perceptions and experiences of Bikeability training amongst parents and children by IPSOS MORI (2010), it found out that most parent agree on the clear role of formal cycle training and that majority of the children and parents who had taken part in the Bikeability training course agreed that the scheme had taught them how to ride their bikes safely on the road and improvement on their cycling skills making them more confident on their cycling. With an overwhelming majority of parents whose children had taken part in the scheme feeling the training had a positive impact on their wards.

This study seeks to find out the extent by which cycle training is done in the UK and the novel practices used and best possible ways of sustaining them.

### 3. METHODOLOGY

Based on the UTSG research paper for the evaluation of child pedestrian training in the UK (Hammond, et al 2011), a survey was developed to find out how cycle training is delivered across local authorities in the UK and was carried out mostly through telephone interviews but online versions were available to suit the needs of certain respondents. The questionnaire consisted of 56 questions of both open and closed questions split in to four different sections namely: Scheme background; Scheme delivery; Scheme evaluation and Scheme feedbacks.

In other to have a good spread sample size, all Road Safety departments in the various local authorities were either called or sent an online questionnaire.

A total of 60 responses were received of which 44 were through the phone interviews and 16 through the online survey.

The 60 responses cut across the various geographical regions in the UK, and the spread is as follows: South West (8); South East (8); London (4); Eastern (4); Mercia (6); East Midlands (4); North west (4); North east (4); Yorkshire and Humberside (4); Wales(6); Scotland (8). There were no responses from Northern Ireland. These were analysed using simple percentages and basic statistical tools to understand the trend of responses concerning cycle training in the various local authorities in the United Kingdom. The results are presented in tables and charts.

#### 3.1 Background of Scheme

To determine the schemes background, respondents were asked to clarify on the general outlines of the various courses from names, framework, ratios and fees. Results are shown in table 1 & 2 and figure 2 & 3. 100% of the

local authorities operated a form of cycle training. Table 1 shows 77% (46) of the Local authorities offered the Bikeability course which is the government brand name for the national standards while the remaining 23%(14) had schemes with different names, with the names mostly stating the intent/type of training being offered,

**Table 1: Scheme names**

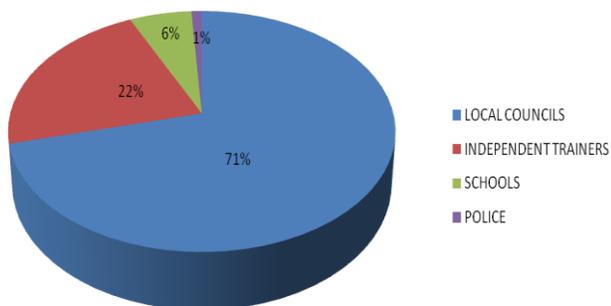
Name of schemes	No.	Percentage (%)
Bikeability	46	77
Others	14	23

Table 2 shows that 78% of the schemes were run free of charge (with subsidy from either the council, department of transport or transport for London) and a fee between £5-£40 was charged in 22% of the schemes.

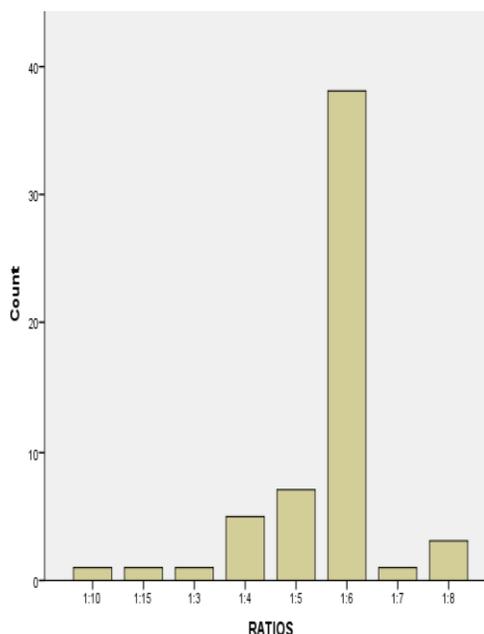
**Table 2: Fees and payment**

Fees and Payment	Percentage (%)
Free	78
£5 - £40	23

Figure 2 shows that 71% of the local authorities ran the schemes themselves, 22% of local authorities contracted it out to Independent training providers (Private firms), 5% were done by schools sport partnerships and only one council scheme is been run by the police. Figure 3 shows the instructor/students ratio of the various schemes, with 71% using the ratio 1:6, 9% using ratio 1:8 and 7% using ratio 1:4.



**Figure 2: Pie chart on who runs the schemes**



**Figure 3: Histogram of instructor/ student ratios of the schemes**

#### 4. RESULTS AND DISCUSSIONS

This section presents results on the schemes delivery, evaluation and feedbacks.

##### 4.1 Aims and Competencies of the Scheme

Responses on the main aims of the scheme generally expanded on the National standard and Bikeability aims and objectives and fell into four main categories:

- ❖ Getting more young people cycling
- ❖ Getting more young people cycling safely
- ❖ Providing basic and quality cycle training delivered by qualified instructors
- ❖ Improving the health of the participant through cycling

Similar to the course aims, the scheme competencies were underpinned on the national standards and Bikeability outcomes. This can be grouped as follows:

- ❖ Basic riding skills and manoeuvres.
- ❖ Bike checks and set up/equipment/ maintenance
- ❖ Signalling and confidence in traffic and overall riding confidence
- ❖ Major turns
- ❖ Highway codes demonstrations

Competence to perform operational duties and route planning.

### 4.2 Targets Groups and Selection Criteria

The study shows that most of the training schemes targeted primary school pupils with only 4% open to everybody. The ability of the participants to ride a bike to an extent was a major selection criterion with only 13 councils (23%) allowing novices without prior knowledge of cycling to be admitted but are given extra time by the instructors. However only 47% of the councils ran any form of adults training basically on 1: 1 ratio and mostly on request basis. Figure 4 shows class years where training is delivered. These tend to agree with earlier findings from a number of studies (RoSPA, 2000; Preston 1980).

### 4.3 Course Duration

The study shows that there was a great deal of variation in both time taken for the course and how this was split (Single period or multiple periods) and also how many days or week it ran through. From Table 3 and Figure 5 it can be seen that the courses had an average length in hour of 8.9 hours per course, a mode of 8 hours and a median of 8 hours. Most commonly the courses were held over two to three sessions of two to three hours each. There

was even more variation on the spread in days and weeks, with the minimum period being 2 days and maximum 8 weeks. This is in contrast to earlier studies which show that training which spreads over several weeks with each session lasting one to one and half hours (approximately a seven hour commitment from a participating child) were more effective than the one or two week intensive trainings (TRL, 1996; Imbeger, 2006).

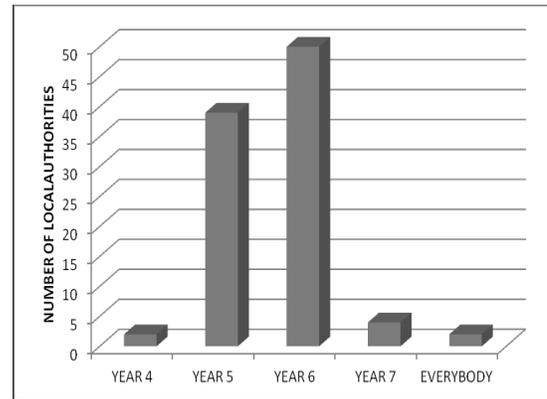


Figure 4: Class years where training is delivered

Table 3: Descriptive statistics of course duration in hours and weeks

	N	Range	Minimum	Maximum	Mean	Std Deviation	Variance
Duration (Hrs)	57	10.0	6.0	16.00	8.8596	2.20137	4.846
Duration (Weeks)	57	8	1	8	1.88	2.112	4.460

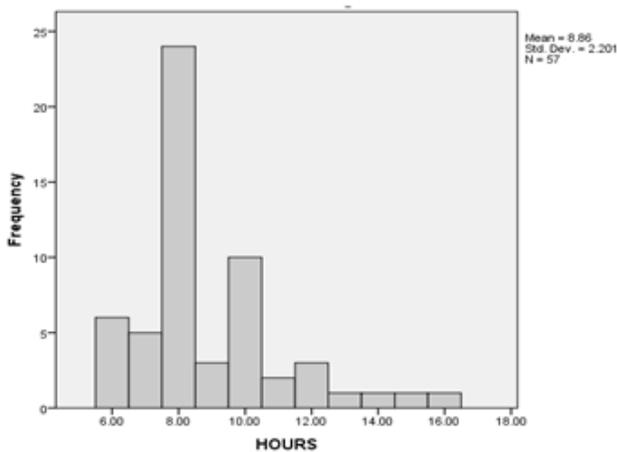


Figure 5: Histogram of scheme duration in hours

### 4.4 Teaching Method

From Figure 6 it can be seen that 36 (63%) Councils used the “Instruction based approach” to teach participants, here pupils are told what to do and directed to follow the

instructions of their instructors, 9 (16%) said they use the “Problem-solving approach” where participants are allowed to resolve issues on their own under the guidance of the instructors, while the remaining 12 (21%) councils said they used Both methods in their delivery. However earlier research have found out that a client- centred problem solving approach as the best teaching method rather than the instruction approach. (TRL, 1996; Franklin, 2002).

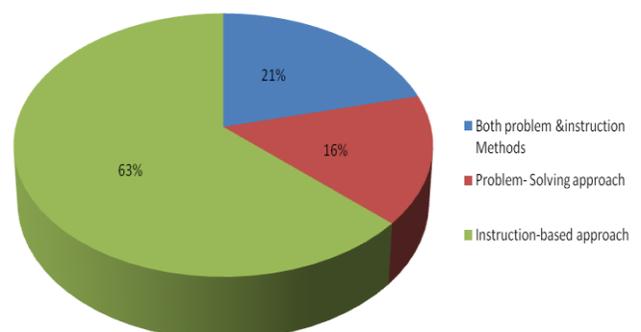


Figure 6: Pie chart of teaching methods

## 4.5 Classroom and Practical Delivery

100% of the councils had practical sessions during training, with only 37% of them having any form of classroom session. The majority of the courses contained session's on-road in real traffic (53 out of 57 councils or 93%). However many of the responses were conditional with many indicating a progressive introduction of riding in traffic, dependent on the competency of the rider (s) and being continuously monitored and supervised by the instructors who must not be less than two at each practical sessions and are able to see each other at all times and sometimes ride with the participant. The TRL (1996) Report found out that the most effective courses in regards to safety ratings where those that had on-road elements this is supported by the Guidelines for the management and operation of Practical Cyclist Training Schemes which it research shows that courses should include practice and training on public roads as Schemes that have no practical roadside training are unlikely to be effective in preparing trainees for the conditions and dangers they will face on road (RoSPA, 2000). However Preston (1980) and James (1993) reported that there was no relationship between public roads or off road training on accidents rates. They argue that there isn't any relationship between exposure and accidents rates as increased risk associated with greater exposure may be an offset by greater ability and competence in cycling.

## 4.6 Scheme Evaluation

Twenty eight of the local authorities (49%) provided some form of evaluation, however mostly this was in the nature of post course feedbacks (basic process evaluation); mostly commonly consisting of questionnaires or feedbacks forms given to participants, schools, parents and instructors to gauge their opinions on how successfully the scheme ran. Only one local authority specifically mentioned a formal evaluation of the course itself. Detail findings from the evaluation were not given or recorded, however almost all of them had positive feedbacks from participants, schools and instructors. Most schools found the schemes quite good and said it had helped increase confidence in the pupils and that there was a general increase in road safety awareness among them. When asked why the scheme hasn't been evaluated, most of the councils did not give any reason, while those that did said either "they had no funding, no time or the scheme has just been on for only a while hence there wasn't much to evaluate"

According to (RoSPA,2000; TRL, 1996; RoSPA 2001), Managers should monitor schemes to ensure that standards, objectives and consistency of training are maintained; The effectiveness of training schemes should be evaluated from time to time.

## 4.7 Scheme Assessment

100% of the councils had a form of assessment. A clear majority of the councils, 38 of them (67%) had "Continuous Assessment" were participants are continuously assessed during the course of the training and where need be are helped and guided. Eight of the councils (15%) had practical assessments at the end of the course while the remaining 10 (18%) had both written and practical assessment at the end of the training. With the written session ranging from multiple choices, open book and written plan, over a time of 20 minutes -1hour. This can be seen in figure 7.

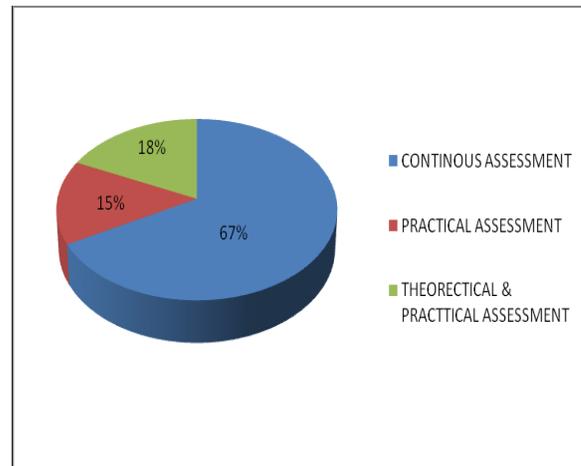


Figure 7: Chart on assessment methods

## 4.8 Parental Involvement and Special Needs

15 councils (27%) had a form of parental involvement in the training of the participants, with nine of the councils being those that were run by volunteers.

All the council responded they had some form of accommodation for persons with disabilities, though with conditions such as: Ability to see, Ability to ride a bike fairly, provision of a special bike if need be. A research on the Scottish training schemes found out that schemes that had parent involvements were found to be more effective packages than those were parents weren't. Active parental involvement in child cyclist training schemes should be encouraged. (TRL, 1996; RoSPA, 2000).

## 4.9 Scheme Feedback

### 4.9.1 Most Effective Element

34 Councils (60%) found the on-road practical sessions the most effective element in the training, they argue that participants are faced with real-life traffic challenges; hence the need to build their confidence through on road training. The TRL (1996) Report found out that the most effective courses in regards to safety ratings where those

that had on-road elements this is supported by the Guidelines for the management and operation of Practical Cyclist Training Schemes which it research shows that courses should include practice and training on public roads as Schemes that have no practical roadside training are unlikely to be effective in preparing trainees for the conditions and dangers they will face on road (RoSPA, 2000). 14% found the whole scheme to be effective. Others found different elements to be effective ranging from: Small ratios, Coverage, delivery and bookings. However 6 (11%) of the local authorities were not sure on which element was most effective arguing that they had no evidence to support any claim.

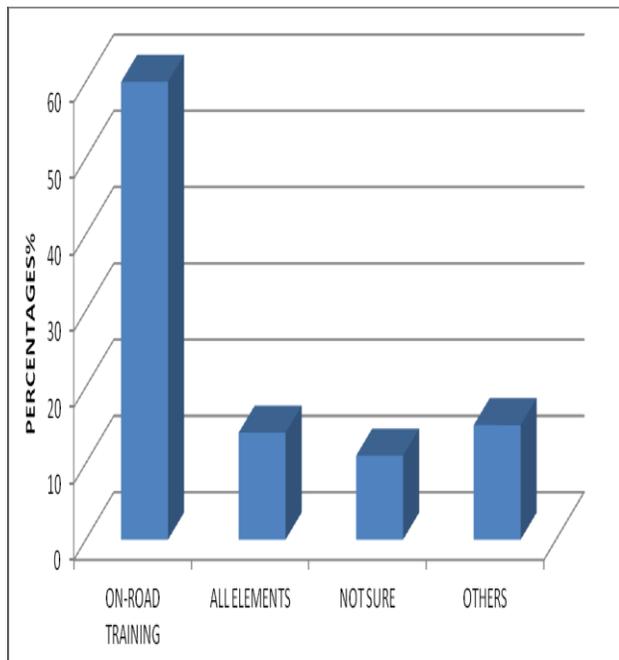


Figure 8: Most effective elements in the courses

#### 4.9.2 Least Effective Element

56% of the councils found no element to be less effective. 2 councils found the off road training to be less effective arguing that pupils were more interested in riding on road. Others least effective elements as mentioned include : Getting schools to participate in the scheme , Training and recruitment of the instructors, Parental constraints, Bad weather, Delivering level 3 training, Manpower .

### 5. CONCLUSION AND RECOMMENDATION

This study has brought into view the delivery of cycle training in the United Kingdom. Cycle training schemes and courses were delivered in all the surveyed local authorities with some dating back as far as 34 years ago. A majority of them (95%) were underpinned under the national framework with 46/57 of them offering the

government brand name course “Bikeability”. The Delivery of cycle training in the UK by Local authorities appears to be the best at the time, though this “best” may be far from good enough.

The content per se of the National cycling standard (Bikeability) can be considered exemplary; however there is some concern as to the delivery among the various local authorities. There are some variations on training process with some organisational, attitudinal and funding problems among the councils impeding the quality and delivery.

The overall conclusion is that while a scheme can only be said to be effective through a process, program and outcome evaluation criteria, there is also a choice between an “ acceptance in faith” and of commitment to demonstrate and deliver the course long-term road safety effectiveness.

Only a few of the councils provided any form of evaluation which was mostly in the form of post –course feedbacks. While this type of evaluations is valuable allowing local authorities to improve the day-to-day delivery of the training, it does not statistically quantify that their learning outcomes and aims (i.e. a positive change to increase cycling skills and roadside behaviour) are being achieved. Only one council specifically mentioned a formal basic process and program evaluation.

Hence due to the lack of definitive data on the long term efficacy of the courses it is not possible to authoritatively announce a single example of best possible training in this context. However the establishment and delivery of an effective cycling training scheme is likely to involve an amalgam of known influential factors and features, but in the spirit of critical and healthy thinking.

Some of the features needed by the various local authorities are as follows:

- Schemes detail evaluations from time to time should be compulsory to ascertain the efficacy of the training and hence improvement where possible.
- The on-road component of the schemes should be deeply imbedded in the courses with full commitment and demonstration by all concern
- The need for greater parental awareness and involvement about cycle training schemes and what they both can and cannot do in terms of safe cycling behaviour cannot be over emphasised. Parents need to be an integral of children cycle education.
- Finally course duration and assessments should be such that participants have enough time to practice their learnt skills and gain confidence, and also there should be properly and formally assessed to see they demonstrate all outcomes.

## ACKNOWLEDGEMENT

The authors are grateful to the Cross River University of Technology Calabar and the Education Tax Fund (ETF) Nigeria for providing the scholarship which made this research possible. Also, the University of Southampton, UK which provided the necessary facilities for this research, and Dr Tom Cherret who supervised the original work.

## REFERENCES

- [1] DfT, 2007. Cycling policy: an overview. [internet]. Available at: <http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/adobepdf/165252/cyclingpolicyoverview> [Accessed 4 September 2011].
- [2] DfT (2010). National Travel Survey Update: How People Travel [internet]. Available at: <http://www.dft.gov.uk/pgr/statistics/datatablespublications/nts/latest/nts2009-03.pdf> [Accessed 10 September 2011]
- [3] DoT (1996). The National Cycling Strategy. London: Department of Transport. [internet] Available at: [http://www.dft.gov.uk/adobepdf/187604/A\\_new\\_deal\\_for\\_transport\\_be1.pdf](http://www.dft.gov.uk/adobepdf/187604/A_new_deal_for_transport_be1.pdf) [accessed 4th August 2011].
- [4] John Colwell & Angus Culverwell (2002): An examination of the relationship between cycle training, cycle accidents, attitudes and cycling behaviour among children, *Ergonomics*, 45:9, 640-648.
- [5] John Franklin (2007) *CycleCraft*. The complete guide to safe and Enjoyable cycling for adults and children. Fourth Edition. The stationary office (TSO). Edinburg.
- [6] John Pucher and Ralph Buehler (2008) *Making Cycling Irresistible: Lessons from The Netherlands, Denmark and Germany* [Internet]. Available at: <http://www.vtpi.org/irresistible.pdf> Accessed : 10TH October 2011.
- [7] Ipsos MORI (2010) Research to explore perceptions and experiences of Bikeability training amongst parents and children [Internet] Available at: <http://www2.dft.gov.uk/pgr/sustainable/cycling/bikeabilitytraining/pdf/bikeabilitytraining.pdf> [Accessed 11 September 2011].
- [8] Kate McMahon and Deirdre O'Reilly (2000) Evaluation of road safety education and Novice driver safety measures in Great Britain. 13TH ICTCT Workshop Driver Proceedings. Road Safety Division Department of the Environment, Transport and the Regions (DETR), GB
- [9] Kelly Imberger (2006). Evaluation of two bicycle programs for primary school children in the act: Bike Ed and the traffic centre road safety package. [Internet] Available at: <http://www.arrb.com.au/admin/file/content13/c6/18Evaluation%20of%20two%20bicycle%20programs%20for%20primary%20school%20children%20in%20the%20ACT.pdf>. (Accessed 15th September 2011).
- [10] Laura Golbuff and Rachel Aldred (2011) *Cycling Policy in the UK: A historical and thematic overview*. University Of East London.(Internet). Available at: <http://www.uel-smg.org.uk/Cycling%20Policy%20Review.pdf> [Accessed 4 September 2011].
- [11] Ministerie Van Verkeer en Waterstaat (2009) *Cycling in the Netherlands* [Internet] Available at: <http://www.fietsberaad.nl/library/repository/bestanden/CyclingintheNetherlands2009.pdf>. [Accessed 15th September 2011]
- [12] Mills P. J (1989) *Pedal Cycle accidents : A hospital – based study*. Department of transport. TRRL Report 220. TRL.
- [13] Preston, B. (1980) Child casualty accidents and cycling proficiency training, *Accident Analysis and Prevention*, VOL 12, 31 - 40.
- [14] RoSPA (2000) *Guidelines for the management and operation of Practical Cyclist Training Schemes* (Internet) Available at: [http://www.rospa.com/roadsafety/info/cyclist\\_schemes.pdf](http://www.rospa.com/roadsafety/info/cyclist_schemes.pdf) [Accessed 9th September 2011]
- [15] Telfer et al (2005) Encouraging cycling through a pilot cycling proficiency training program among adults in central Sydney [Internet] Available at: [http://www.massbug.org.au/twiki/pub/MASSBUG/Resources/cycling\\_skills\\_course\\_evaluation.pdf](http://www.massbug.org.au/twiki/pub/MASSBUG/Resources/cycling_skills_course_evaluation.pdf) [Accessed 30th June 2011]
- [16] TRL (1996) *The effectiveness of child cycle training schemes*. TRL Report 214. [Internet] Available at: [http://www.trl.co.uk/online\\_store/download\\_form/download\\_complete.htm?id=5096](http://www.trl.co.uk/online_store/download_form/download_complete.htm?id=5096) [accessed 14TH September 2011]
- [17] WHO (2009) *Global status report on road safety: Time for action* [Internet] Available from: <http://www.un.org/ar/roadsafety/pdf/roadsafetyreport.pdf> Accessed : May 5th 2011.